

Nuclear Division News



A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 8/No. 21 October 27, 1977

Toll enrichment nets \$131 million in third quarter

More than \$131 million in toll enrichment sales were reported at ORGDP during the third quarter of 1977, bringing the total sales for the year to nearly \$286 million. This compares to \$217 million in sales reported during the same period for 1976.

During the third quarter of 1977, more than one million pounds of enriched uranium were shipped for use in nuclear reactors in Japan and Sweden, and in the states of Florida, Georgia, Illinois, Iowa, Michigan, New Jersey, Oregon, Pennsylvania, South Carolina, Virginia, Washington and Wisconsin.

Under the Toll Enrichment Program, privately licensed owners bring their uranium to a gaseous diffusion plant for enriching on a toll basis. Customers are charged for the services required to separate from natural uranium the desired percentage of the uranium-235 isotope, usually between two and three percent.

The corporate world of Union Carbide

A \$30 million expansion of its industrial gas production in Europe, involving the construction of air separation facilities in France and Germany, has been announced by Union Carbide Corporation.

Each of the two new plants will have a capacity of 250 tons per day of liquid oxygen, nitrogen and argon when completed during the latter part of 1979. The plants will be strategically located near industrial areas with growing requirements for industrial gases. These developing markets are currently being served by deliveries of liquefied gases from two air separation plants at the Antwerp petrochemical complex of Union Carbide Belgium N.V., a wholly owned affiliate of Union Carbide.

Union Carbide has been actively engaged in the industrial gas business in Europe for more than 20 years. The first air separation plant was built in Spain in 1955 by an affiliate of Union Carbide and subsequently other gas production facilities have been constructed elsewhere on the continent to serve the requirements of the common market countries.

patents...

To Raymond J. Brown, Y-12 Plant, for "Tool Setting Device."

Robert Merriman appointed director of Gaseous Diffusion Development

J. Robert Merriman has been appointed Director of the Gaseous Diffusion Development Division at ORGDP, succeeding Herbert E. Trammell who recently was named director of ORNL's Engineering Technology Division. Merriman's appointment was announced by William J. Wilcox Jr., technical director for the production plants of the Nuclear Division.

Merriman has been manager of Engineering and Technical Services

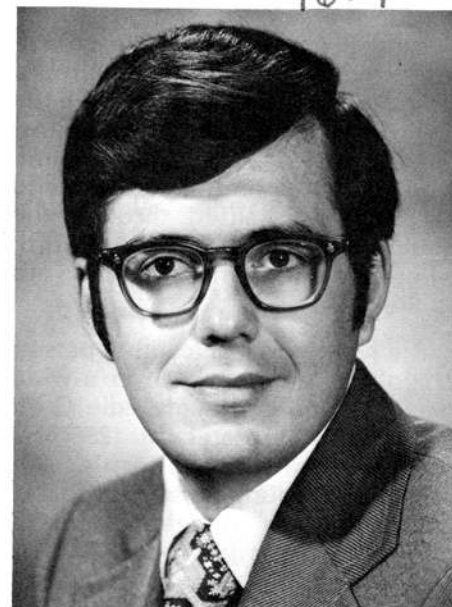
for PGDP. In his new position, he will be responsible for the barrier development, gaseous diffusion development and advanced isotope separations program being conducted at ORGDP and Y-12.

A native of Maryville, Tenn., Merriman received his bachelor's degree in chemical engineering from Vanderbilt University and his M.S. and Ph.D. degrees from the University of Tennessee. He also participated in the Management Program for Executives at the University of Pittsburgh.

He first joined Union Carbide Corporation as a summer student in ORNL's Chemical Technology Division. In 1963 he joined the staff of the Engineering Development Department at ORGDP where he was involved in a variety of chemical process development activities related to isotope separation, nuclear fuel reprocessing, nuclear waste disposal and special materials production.

In 1973 he transferred to the Paducah plant where he served as superintendent of the Planning and Technical Support Division, and head of Plant Engineering before being named manager of Engineering and Technical Services.

Merriman is a member of the American Institute of Chemical Engineers and is a past president of the Knoxville-Oak Ridge Section. He and his wife, Sandra, live at Route 1, Mayfield-Metropolis Road, Paducah,



J. Robert Merriman

but plan to move to the Oak Ridge area in the near future.

Standard Time returns at 2 a.m., October 30

Area clocks will be rolled back one hour Sunday, October 30, at 2 a.m., putting Tennessee and Kentucky residents back on Eastern and Central Standard Time.

Shift workers who will be on duty Saturday night report in on Daylight Savings, and go out on Central Time. Presumably, the clocks will be changed back again in the spring.

Campaign ends at 114 percent of goal

The Nuclear Division's 1977 United Way campaign for Oak Ridge was completed last Friday, October 21, with an unofficial total for all three plants of \$687,795—114 percent of this year's goal of \$605,000.

This total, based on daily reports through Friday afternoon, reflects the following contributions:

ORGDP—\$236,676 (118 percent of goal);

Y-12—\$190,227 (115 percent of goal);

ORNL—\$260,891 (108 percent of goal).

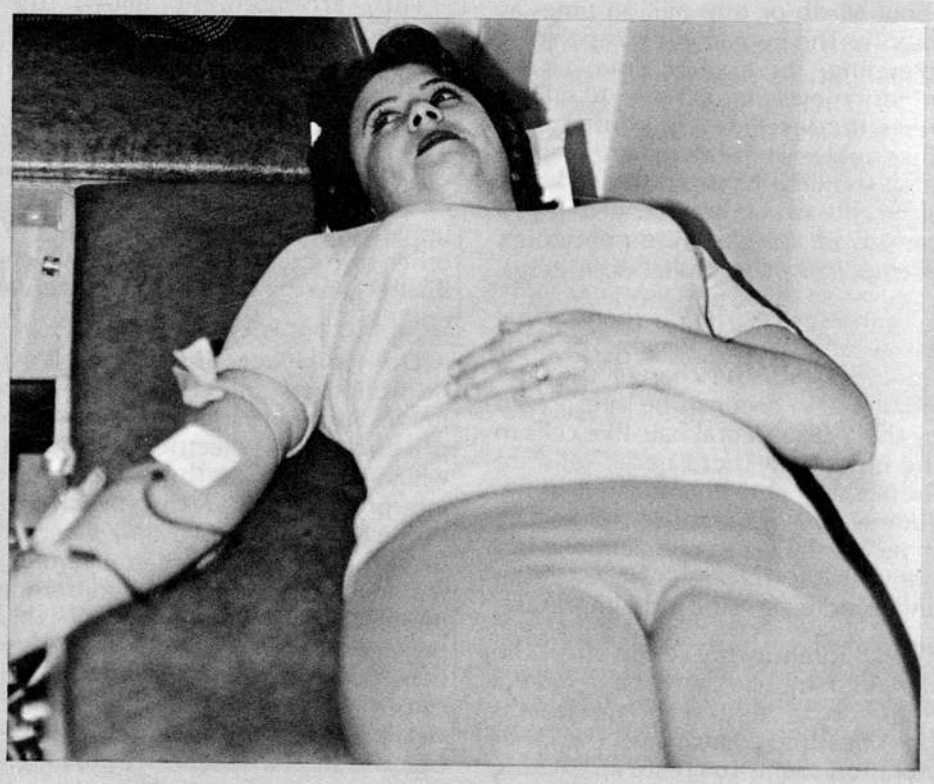
A final report on the 1977 campaign, showing official figures, will be appear in an upcoming issue of *Nuclear Division News*.

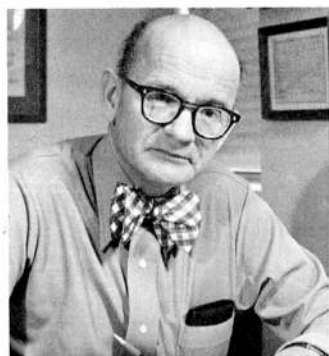
in this issue...

Sharmon Booker, Paducah's Fabrication and Maintenance Division, relaxes on the donor table at one of the plant's recent blood drives. Booker was the first in line at the blood program's inception back in October of last year. The story and other photos of Paducah employees' concern for others are seen on page 5.

Other features:

- Dr. Lincoln page 2
- Y-12 essay contest on safety page 2
- Question Box page 3
- Environmental Sciences' new facility page 7





Sound the trumpet Beat the drums

by T. A. Lincoln, M.D.

(Editor's Note: Dr. Lincoln alternates his regular column with "The Medicine Chest," where he answers questions from employees concerning health in general. Questions are handled in strict confidence, as they are handled in our Question Box. Just address your question to "Medicine Chest," NUCLEAR DIVISION NEWS, Building 9704-2, Stop 20, Y-12, or call the news editor in your plant, and give him or her your question on the telephone.)

In this clanging, banging, roaring world, the ear takes a "beating" because of exposure to excessive noise. Paradoxically, it requires a different kind of beating to make the delicate and fantastically sensitive hearing mechanism work. Sound vibrations beat on the eardrum and are then transmitted through the middle ear to the organ of Corti, where the sensory nerve endings are located.

The healthy ear of a young person can often hear sounds over a wide range of frequencies. Middle C on the piano vibrates at 256 Hz (vibrations per second). An exceptional young person (probably female) can hear vibrations as low as only 16 Hz to as high as 24,000 Hz. Most young adults with good hearing can hear up to 10,000 and maybe 12,000 Hz.

The range of intensity the ear can distinguish or momentarily tolerate is also equally impressive. Sound intensity is measured in decibels (db). Zero decibel is the smallest amount of sound a young healthy ear can hear. It can also be expressed as sound power in watts. The lowest sound power level that can be perceived is one trillionth of a watt. A soft whisper has a sound power level of about 1 billionth of a watt.

Decibels are on a logarithmic scale so that an increase of from zero db to 20 db is much more than a 20 percent increase in the sound pressure level. It is actually 100 times as loud. Conversational speech at three feet is about 60 db or one million times as intense. The human ear is capable of tolerating, for a short time, sound intensity levels of 100 db—10 billion times the level which is just barely discernible. The ears of an average adult should not be exposed to levels of 90 db or higher for prolonged periods of time because permanent hearing loss may result.

Sounds are carried to the external ear as vibrations or waves. These air vibrations must be changed to fluid vibrations in order to be interpreted by the 24,000 neural hair-like cells in the inner ear. These nerve cells are the sensory end-organs for hearing. Sounds can be transmitted to the inner ear by other mechanisms, but transmission through the eardrum and middle ear is the most important.

High intensity music can affect the skin and muscles and be felt as a flutter or "beat." Tragically, at least as far as hearing is concerned, this inner vibration seems to create an exciting

physical sensation, particularly in young people. They desire the music to be played so loudly when they dance or listen that it can seriously damage their high frequency hearing.

By placing the end of a vibrating tuning fork on the skull, the sound can be transmitted through the bones of the skull to the inner ear. Such sound follows the "bone conduction pathway." Sounds which use the usual air conduction pathway require transmission through the middle ear mechanism.

As an indication of the incredible delicateness of the eardrum mechanism, it has been claimed that subtle differences in speech or music can be perceived which require only a displacement of the drum equal to the diameter of a molecule of hydrogen gas!

The eardrum is a tightly stretched membrane which protects the middle ear from the external environment. On the inside surface, a tiny bone called the hammer (malleus) is attached. When a sound wave pushes the eardrum inward, the handle of the hammer is moved in the same direction as the drum head. The hammer and a second bone called the incus, or anvil, vibrate as a unit. The third bone, called the stapes or stirrup, works like a plunger. It pushes in and out of a tiny opening called the round window. On the other side of this window is a circular bony tube containing a serous fluid—perilymph.

This arrangement allows the vibrations produced by the eardrum to be reduced in amplitude but increased in power by a ratio of about two to one. This power increase is necessary to produce large enough waves to depress another membrane located within the tube. In turn, it sets up vibrations in another fluid on the other side called endolymph, which finally gets the sound to the nerve endings.

Do you agree that it is a complicated mechanism?! The nerves which are finally stimulated to produce the electrical impulses which are sent to the brain to be interpreted as music or speech are protected by an eardrum, a set of three bones and two sets of fluids, each separated by a different membrane. In spite of all this protection, the ear can be irreversibly damaged by loud noise. The nerve endings, nearest to the round window and on the bottom of the bony tube, are sensitive to high

Y-12 Maintenance Division essay contest proves success



ESSAY WINNERS—Winners in Y-12's Maintenance Division take awards for their essays submitted during a recent contest. Sixty-five entries were submitted. From left are Dennis E. Sharna, Roy S. Nabors (first place winner), J. W. "Bill" Ebert, division superintendent; Janet L. Eskridge, Jimmie L. Rooks and Carl E. Ridenour.

The Maintenance Division of Y-12 recently staged an essay contest, resulting in 65 entries. Roy S. Nabors, Research Services, took the top prize with the best overall entry.

Research Services took two of the other five places, as Jimmie L. Rooks and Janet L. Eskridge came up with top entries. The Electronic and Electronics Department's Dennis E. Sharna took an excellency award, as did Process Maintenance's Carl E. Ridenour.

J. W. "Bill" Ebert, division superintendent, in congratulating the winners, stated that he was "impressed with the quality of thought brought out in the messages."

Judging in the essay competition was done by Ron Benvegna, Loren Lawhorn, Pat Porter and Homer Moss, Y-12's Safety Department.

These were a few of the comments: "A little time spent in eliminating possible falls, accidental poisoning, fires, etc., may add years of happiness and prosperity for my family, friends and myself."

next issue...

The next issue will be dated **November 10. The deadline is November 2.**

pitched sounds and are easily damaged.

Hearing is a delicate mechanism which can still tolerate considerable abuse. The eardrum needs to be tapped on like it is a small snare drum. Instead of beating a strident march rhythm with heavy sticks, it needs to be stroked with light brushes. Young people who beat on it like it was a bass drum with noises at 90-110 db are destroying a priceless instrument. One would think that workers who have been advised to wear hearing protection in noise risk areas would do so eagerly. The fact that supervisory action is sometimes required to get a worker to protect his hearing is one of the unfortunate perversions of human nature!

"All of us are subconsciously safe to some degree due to our survival instinct, but in today's highly mechanized society we must do more than react to imminent danger."

"I know that the pencil lying on the floor could present a tripping hazard to me or my fellow workers. I am aware that my chair does not serve a dual purpose as a stepladder when I need something off the top of the storage cabinet."

"Safety consciousness means being alert to potentially dangerous situations."

Winners of the contest were awarded a smoke detector, an ice cream freezer, a tool chest, a cooler chest and a fire extinguisher with a child's life preserver

Safety awareness means a lot more. .

By Roy S. Nabors

Safety consciousness means much more than the implied definition of "being aware of the potential dangers which exist around us." This awareness is a positive plus in any safety program and, undoubtedly, contributes to a reduction in injuries of all types.

Unfortunately, being aware is not enough. Implementation of safe operating practices is required in order to significantly increase the freedoms that safety affords each and every one of us. Freedom? Yes, the freedom to work or play without pain. The freedom to have full use of our hands, legs, arms, sight and hearing as we enjoy the world around us.

Too often we are "conscious" of the dangers, and "unconscious" to the ever-present consequences of unsafe practices. We each need to constantly remind ourselves that a "potential" moment of saved time is not worth the risk of spending the rest of our lives maimed or in constant pain. Unsafe practices are merely an infringement upon the freedoms of ourselves or others.

Safety consciousness is being aware of the potential dangers on and off the job, implementing safe procedures and enjoying the invaluable freedoms we appear to take for granted.

question box

If you have questions on company policy, write the Editor, **Nuclear Division News** (or telephone your question in, either to the editor, or to your plant contact). Space limitations may require some editing, but pertinent subject matter will not be omitted. Your name will not be used, and you will be given a personal answer if you so desire.

Matching skills with job

QUESTION: Why are secretaries not matched with jobs to better suit their abilities, skills and preferences? Professionals are matched to jobs most suitable for their training and talents.

ANSWER: The main objective of the Job Opportunity System is to provide weekly salaried employees an opportunity to apply for positions to best utilize their abilities, skills, and preference for different job openings. This system is advantageous to both the employee and the Company.

If you are in a job and would like to move laterally to another secretarial job, discuss this with your supervisor and the Job Opportunity System coordinator at your installation. Sometimes this can be arranged.

Company identification

QUESTION: I would like some kind of identification to carry in my wallet showing I am an employee of Union Carbide at Paducah. I have been asked for such identification when renting a car, cashing a check, etc. Is some sort of identification available?

ANSWER: Nuclear Division identification cards are available, at all installations, for those employees whose work requires frequent travel or who have some other legitimate need for such identification. The request for a card requires approval by your division superintendent.

Guards' overtime—ORGDP

QUESTION: Why is the Nuclear Division spending a lot of money on overtime in the Guard Department at ORGDP? There are not enough vehicles and radios to go around. It seems some of that money would be better spent on equipment needed.

ANSWER: It is true that the Guard Department employees at ORGDP have recently worked a significant amount of overtime. This has been necessary because of the heavy construction activity. Many of the construction personnel on these projects are uncleared and require guard surveillance and/or escort.

Additional vehicles or radios would not eliminate this temporary need to work substantial amounts of overtime.

Job bidding system

QUESTION: Recently several bidders with four to six years' experience in the General Accounting Division were disqualified for an accounting position by the coordinator. No interviews were granted, yet another applicant with less than one year of experience was granted an interview. Why doesn't the supervisor with the opening interview all bidders?

ANSWER: The administration of the Job Opportunity System (JOS) at ORGDP is described in the JOS booklet issued there. The system provides that all bidders be screened by the coordinator to assist the hiring supervisor. Based on information and recommendations supplied by the coordinator, the hiring supervisor decides which applicants to interview.

In connection with the opening we think you refer to, there were six bidders; three of these were interviewed and one selected to fill the opening.

Interviewing individuals who clearly do not meet the position's requirements might offer false encouragement and, in our judgment, would not serve a useful purpose.

Promotion time span

QUESTION: How much time span is there between a promotion from Engineer I to Engineer II? Is this a Union Carbide rule, or is it peculiar to the Nuclear Division?

ANSWER: The movement from one engineering level to another engineering level has been based primarily on performance and job assignments and has not been tied to a specific time span. There is no Union Carbide Corporation policy concerning this matter, although some other divisions do follow the same practice that the Nuclear Division does.

(Please see page 4)

Savings Plan—Personal Investment Account

	Fixed Income Fund	UCC Stock	Equity Investment Fund
December 75	11.9880	58.7886	7.8231
December 76	13.0554	59.2723	8.8167
July 77	13.7097	48.7163	8.1436
August 77	13.8178	46.5880	8.0671
September 77	13.9146	44.7254	8.0530

Note: Fixed Income Fund unit values reflect interest additions to achieve the guaranteed effective annual interest rate of 8.70% for 1977. Union Carbide stock values are the average cost of stock purchases during the month plus brokerage charges. Equity Investment Fund unit values represent the month-end market value of securities held by the Fund. The price of each unit is determined by dividing the total value of the securities by the number of units in the Fund.

Mynatt to direct Reactor Safety

Fred R. Mynatt has been appointed program director for the Reactor Safety Research Program at ORNL.

Mynatt has been head of the nuclear engineering analysis section in the Neutron Physics Division. He succeeds Gordon Fee, recently appointed as project manager for the Gas Centrifuge Project Office. Fee also had served as director of the Laboratory's Engineering Technology Division.

The programs for which Mynatt will be responsible involve safety research for current commercial light-water-reactor nuclear power plants as well as advanced systems such as breeder reactors.



Mynatt

Mynatt joined the Nuclear Division staff in 1965 as a member of the Scientific Applications Department at the Computing Technology Center. Previously, he had been a member of the analytical physics group of Pratt and Whitney Aircraft Company's Connecticut Advanced Nuclear Engineering Laboratory.

Security supervisor named for PGDP



Vickery

Carlton J. Vickery has been named security supervisor in the Employee Relations Division, Paducah Plant.

A native of Savannah, Ga., Vickery served 14 years in the U.S. Coast Guard and four years in the U.S. Army. He has a B.S. degree in criminal justice from the University of Nebraska. He also completed courses at the New Jersey State Police Academy. He is a member of the Associated Locksmiths of America, the Military Police Association and the Professional Criminal Justice Fraternity.

Vickery and his wife, Maria, live on Country Club Lane, Paducah, with their children, Lori and Lynn.

Firewood cutting set November 4, 5

Another area firewood cutting is set for Friday and Saturday, November 4 and 5, for local citizens to cut wood for their personal use. A permit fee of \$5 is charged each day, and cutters must bring their own equipment.

Interested parties should meet in the parking lot on Bethel Valley Road, east of the main entrance to ORNL between 8 and 9:30 a.m. Additional information may be obtained from Dennis Bradburn, ORNL Environmental Sciences Division, extension 3-1266.

He is a member of the American Nuclear Society and immediate past chairman of the society's Radiation Protection and Shielding Division. He also served as technical program chairman for the 1977 WATtec energy conference, held in Knoxville.

Mynatt received his B.S., M.S., and Ph.D degrees in nuclear engineering from the University of Tennessee.

He lives at 10636 Sandpiper Lane, Concord.

New senior planner for social sciences

Thomas J. Wilbanks has been appointed a senior planner for social sciences in the Energy Division at ORNL. The appointment was announced by Division Director William Fulkerson.

Wilbanks will assist in developing social science capabilities, and integrating these with other energy research programs at the Laboratory. He comes to the Nuclear Division from the University of Oklahoma, where he was chairman of the Department of Geography and a research fellow in the Science and Public Policy Program.



Wilbanks

Born in Texarkana, Ark., Wilbanks received his bachelor's degree in social sciences from Trinity University and his M.S. and Ph.D. degrees in geography from Syracuse University.

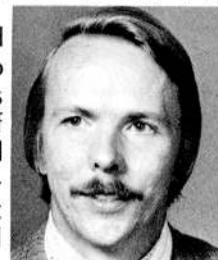
He has served as a consultant to state and federal agencies, including the former Energy Research and Development Administration and the Office of Technology Assessment. He is treasurer of the Association of American Geographers and a member of the American Academy of Political and Social Sciences.

He and his wife, Kay, have three children, Kathy, Lisa and John.

Mundt to direct Quality Assurance

Frederick D. Mundt has been named coordinator of the Quality Assurance Program at ORGDP. He joined Union Carbide at the Y-12

Plant in 1967 and transferred to ORGDP in 1975 as superintendent of the Vendor and Equipment Evaluation Department in the Technical Services Division.



Mundt

A graduate of UT, he has an M.S. in physics, and is a member of Sigma Pi Sigma, American Association for the Advancement of Science and American Society of Nondestructive Testing.

Mundt is married to the former Margaret Diane McLemore, and they live at Route 2, Powell. The couple has three children: Elizabeth, Douglas and Michael.

about people...



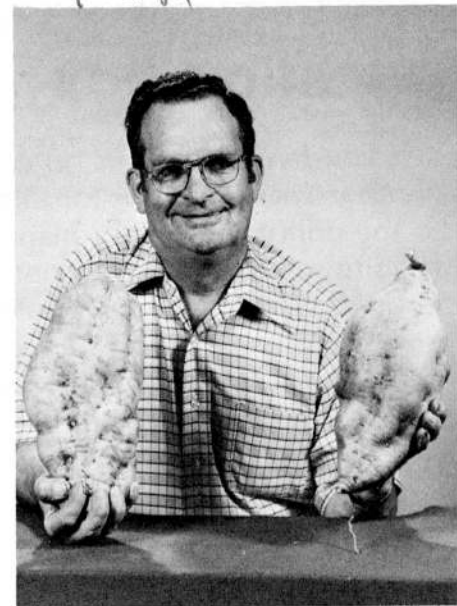
Edward G. Struxness, an associate director of ORNL's Environmental Sciences Division, has been awarded an honorary doctor of science degree by Luther College, Decorah, Iowa.

Struxness graduated from the college in 1935, and was certified by the American Board of Health Physics in 1950. He has done graduate studies at Northwestern University and the University of Tennessee. In 1975, he received the American Nuclear Society's Special Award for waste disposal and management.

As part of his visit to the college, Struxness presented the 1977 Sherman Hoslett Memorial Lecture on "Nuclear Power in the United States: Today's Reality" to students, faculty and alumni. The lecture is in memory of a man who taught at Luther College for nearly 30 years, and was recognized as a pioneer in the teaching of ecological concepts in natural history and field biology.

Hadassah benefit

The Oak Ridge Chapter of Hadassah is sponsoring a benefit exhibit and auction of fine art Sunday, November 13 at the Alexander Motor Inn, Jackson Square. Original oil paintings, batiks, etchings, serigraphs and lithographs will be shown and sold. Showings start at 2 p.m., when wine and cheese will be served. The auction starts at 3 p.m. There is no admission charge. Additional information may be obtained from Mrs. Max Kimmelman, telephone 483-7972.



YEAR FOR YAMS—Henry D. Williams, Y-12's Tool Grinding Department, brought in proof recently of giant sweet potatoes grown at his 117 South Beverly Circle, Oak Ridge, home. The one in his right hand weighed three and one-half pounds; the one in his left weighed almost three pounds.

Paducah golf...

The next swing of the clubs for Paducah golfers will be taken on the Mayfield Country Club course Saturday, October 29. A pre-winter scrabble is scheduled for November 12 at the Boots Randolph Barkley Lake Resort. Interested players may contact any golf committee member to sign up or call the Recreation Department, Bell extension 208.

question box...

(Continued from page 3)

Retirement benefits

QUESTION: What programs, other than a pension, does Union Carbide provide for Nuclear Division retirees?

ANSWER: Retirees receive a reduced amount of life insurance—at no cost—if they have been a member of the Group Insurance Plan for at least one year at the time of retirement. Layoff allowance is paid to retirees for their length of service through December 31, 1965 (December 31, 1966 for P&M hourly employees at ORGDP and Paducah) plus any earned but unused vacation. Social Security, to which both the employee and the Company have contributed, is payable in accordance with eligibility regulations. The Personal Savings account settlement can be received in monthly payments over a designated period.

Early retirees have the option of continuing their participation in the

Company's life insurance program and/or hospitalization and major/special medical insurance until age 65 by paying half of the premium—the Company pays half also.

Other services provided retirees are continued receipt of the *Nuclear Division News*, continued participation in the recreation and park programs, Company store privileges, and, of course, the Benefit Plans Offices stand ready to answer inquiries from retirees or survivors of retirees.

wanted...

ORNL

FIFTH CAR POOL MEMBER from vicinity of Middlebrook Pike, Cedar Bluff Road, and Landmark and Gulf Park Subdivisions, Knoxville, to East Portal, 8:15-4:45. J. W. Sims, plant phone 3-1486, home phone 693-8829.

JOIN CAR POOL from West Hills, Walker Springs exits, Knoxville, to any portal, straight days. Robin O'Hatnick, plant phone 3-6171, home phone 693-2550.

RIDE ONLY from Michigan Avenue, Kentucky Avenue area, Oak Ridge, to West Portal, 7:45 a.m. Anis Chowdhury, plant phone 3-1592.

OCCASIONAL RIDE for part-time employee from Broad Acres, Powell, to East Portal, straight days. Call 947-0347, Powell.

ORGDP

CAR POOL MEMBERS from West Knoxville, Cedar Springs area, to Portal 2 or 4, 7:45-4:30 shift. Stan, plant extension 3-3718, home phone 690-7237.

JOIN CAR POOL from Cherokee Apartments, Paint Rock Ferry Road, Kingston, to Portal 4, 8 to 4:30. Becky Durham, plant phone 3-3286.

Y-12

Will JOIN OR FORM CAR POOL from Middlebrook Pike exit, I-40, Knoxville, to any portal, straight days. Ginny Nelson, plant phone 3-5719, home phone Knoxville 588-6752.

patents granted...

To Howard L. Gerth, Y-12 Plant, for "Combination Spindle-Drive System for High Pressure Precision Machining."

To John G. Banker and Hubert L. Wigginton, both of the Y-12 Plant, for "Method for Melting Metals to Reduce Contamination from Crucibles."

To Paul H. Hight, Harry H. Eldridge, Robert A. Jones and Gordon M. Lindner, all of ORGDP, for "Automatic Box Loader."

To Martin L. Bauer, Wayne F. Johnson and Dale G. Lakomy, all of ORNL, for "Dynamic Multistation Photometer."

To Ronald L. Beatty, Bill R. Chilcoat and Dale V. Kiplinger, all of ORNL, for "Method for Applying Pyrolytic Carbon Coatings to Small Particles."

retirements...



Stanley F. Carson
Biology, ORNL
30 years service



Lynn F. Ellis
Y-12 Guard Department
23 years service



Albert F. Stegall
Y-12 Electrical
10 years service

division deaths...

Mary Jane East, make-up artist in the Technical Publications Department, ORNL Information Division, died October 9, at Fort Sanders Presbyterian Hospital, Knoxville.

Mrs. East was an ORNL employee for four years. She lived at 135 Villanova Road, Oak Ridge.

Survivors include: daughters, Mrs. Linda Grooms and Carla East; mother Lora Scarbrough; father, Willard Owens; two sisters, Betty Vann and Joni Lomax; and four brothers, Troy, Ray, James and Richard Owens.

Services were held at Sharp Funeral Home, with burial at Anderson Memorial Gardens.



Mrs. East

Hugh C. Monger Sr., Computer Sciences at ORGDP, died October 12 at the Oak Ridge Hospital.

Mr. Monger joined Union Carbide in 1955, and was a veteran of the U.S. Navy. He was a member of the Metropolitan Planning Commission and a former school board member in Loudon County.

Survivors include his wife, Virginia, 905 West Sixth Avenue, Lenoir City; daughter, Joan Allen; son, Hugh C. Jr.; sisters, Mrs. Frank Pickle; Mrs. Ralph Jenkins; brothers, Lyman, Ronald, Alva, Leland, Birchel, James and John.

Funeral services were held at the Central United Methodist Church, with burial in the Lakeview Cemetery. The family has requested the memorials be in the form of gifts to the church or to the Heart Fund.



Mr. Monger

Nuclear Division News

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Year-old blood program success at Paducah Plant

Caring enough to give. That's the word from Paducah, as employees there have given 1,318 units of blood to help supply the Red Cross Blood Center's needs, since its opening a year ago. This figure represents some 36 percent of the total blood drawn in McCracken County. However, the Center accommodates some 21 hospitals in four surrounding states and provides emergency requirements as well.

Officials at the Blood Center, which is part of the Nashville Regional Red Cross Blood program, state that the Paducah plant holds an unrivaled first place in the comparative donation totals of area industries. They also state that Paducah employees always meet their quota, often exceeding the 100 pints per visit goal. During September the quota was surpassed by 41 units!

'A gift of life'

Unlike a money gift, the donation of blood is a gift of life. Employees feel a quiet satisfaction, with the rewarding thought that they have possibly helped directly save someone's life. Albert P. Hudson, Cascade Operations, is a two-gallon donor who has a goal of five. "It just makes me feel good to give," he says on his way to donate for the fourth time as a Carbide donor.

Jack Chapman, Power, Utilities and Chemicals, has donated 70 units of blood since the early 50's. He began at the Mayfield-Graves County chapter and has been giving on a regular basis ever since. Chapman says he plans on giving as long as he can.

Each donor important

But Blood Chairman Bob Washer, Maintenance Engineering, is the first to point out that **every** donor is vital to the area's blood needs—be it his 21st pint or his first visit. Each donor has a different blood type and make-up, just as each recipient has different needs.

Washer's coordinating efforts have paid off, as statistics prove. During the first year of the program, more than 800 employees at Paducah have participated in the program, constituting almost 35 percent of the plant's population.

Many blood uses

Medical personnel take every precaution to safeguard both the donor and the recipient when dealing with blood. Several evaluations are made of the person's ability to give blood before any action is taken. After the blood is taken, it is transported to the center, typed and tested for numerous diseases and antibodies.

The blood is also used to make any of several products such as packed red cells, plasma, cryoprecipitate or platelets. Some units are frozen and kept on hand at the center—particularly rare blood types or antibodies. The remainder is distributed to area hospitals.

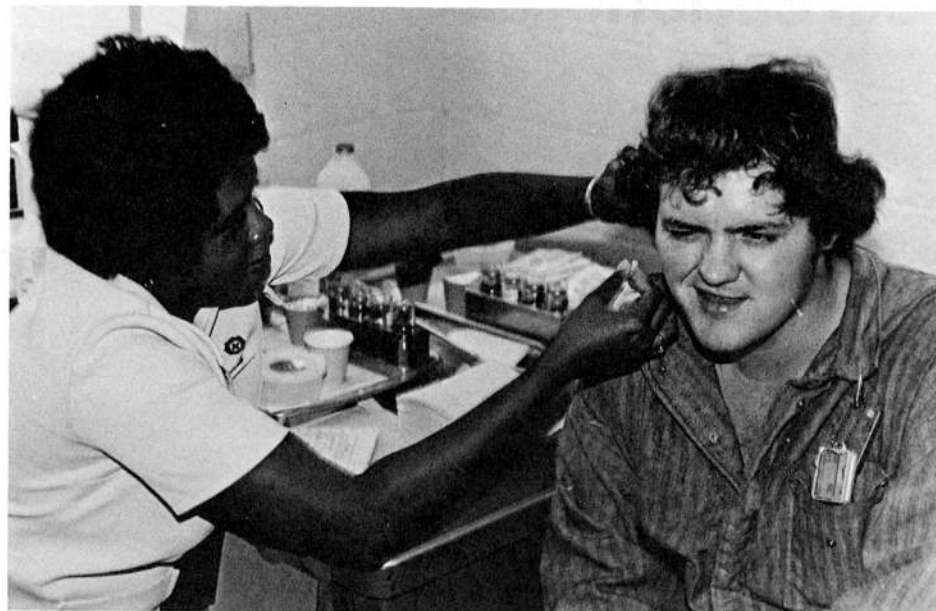
The procedure takes between five and eight minutes depending on the individual. Testing, interviewing and registration usually take about 45 minutes.

Organization praised

Ruth Elkins, R.N. with the mobile unit, says: "All the people at Union Carbide have been very cooperative. We really look forward to coming, because it is organized so well."

Last year, employees at Paducah helped bail the center out of an emergency situation during the prolonged snow by providing between 50 and 75 units on a few hours notice. This effort was noted in the *Paducah Sun-Democrat* and the *Louisville Courier-Journal*.

Employee participation has not peaked, according to plant records. Anyone who is not a donor but would like to participate in the program, should contact Bob Washer, C-720 Building. Such a minor thing to do when a life is at stake.



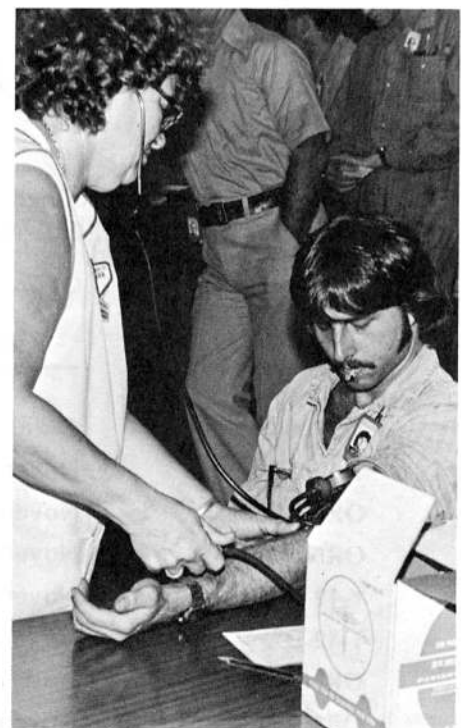
FOURTH TRIP—Roger Melugin, Paducah's Maintenance Department has a blood sample taken from his ear lobe prior to his fourth blood donation in the past year.



FIRST STOP—Registration is the first item for prospective blood donors. Here a volunteer gathers information as part of the pre-drawing evaluation. A medical history is also taken to protect the recipient of the blood, as well as the donor.



PRIDE AT PADUCAH—Paducah employees were proud of their contribution to the area's blood needs with their entry in the city's Labor Day parade. This float was coordinated by Eugene P. Larson, Engineering Division, and Robert E. Gooud, Instrument Department.



PRESSURE CHECK—The donor's temperature and blood pressure are recorded and checked against the program's standards. Several health requirements must be met by the donor to protect himself as well as the recipient of his blood.

recreationotes



LEATHERCRAFT WORK—Barbara Pullen, former Y-12 employee and wife of Bill Pullen, Y-12's Development Division, is seen with some of her crafts designed from leather. Her work, and that of many other Nuclear Division people, will be seen at the Foothills Craft Guild show November 4, 5 and 6 at the Oak Ridge Civic Center.

TURKEY SHOOTS

Following is a list of remaining turkey shoots for all Union Carbide employees. They are held at the Oak Ridge Sportsmen's Association. The shift sponsor is also indicated.

Shift	Date	Hours
Y-12 A	October 29	9 a.m.-noon
Y-12 C	November 5	9 a.m.-noon
ORNL D	November 11	8 a.m.-noon
ORNL C	November 11	12-3 p.m.
Y-12 B	November 12	9 a.m.-noon
Y-12 D	November 12	12-4 p.m.
ORNL A	November 16	8 a.m.-noon
ORNL B	November 20	9-11 a.m.
Y-12 A	November 26	9 a.m.-noon
Y-12 B	December 10	9 a.m.-noon
Y-12 D	December 17	9 a.m.-noon

Carbiders contribute to craft show in Oak Ridge next week

The 11th annual Foothills Craft Guild Show is set again next week at the Oak Ridge Civic Center. This year's dates are 10 a.m. to 8 p.m. November 4, 5 and 1 to 6 p.m. November 6. Admission is \$1 for people over 18. Parking is free. The show and sale exhibit will occupy the entire Center.

The Guild has grown from 1968 with 25 charter members to a total of more than 150 talented Tennessee craftsmen. In addition to providing the area with the finest in crafts, the Guild supports the Oak Ridge Arts Council, lends financial assistance to the Oak Ridge Children's Museum, and helps support cash prizes for the High School Craft Show. A special scholarship supplies a grant for a student to attend Arrowmont School of Crafts in Gatlinburg or Penland School of Crafts in North Carolina. Many craftsmen return their talents to the community in teaching adults and children in classes at the Y, Oak Ridge Community Art Center, New Prospect in Knoxville, UT College of Related Arts, Community Craft Cooperative and many other organizations.

Board members

Union Carbide employees serving on the board include Donald H. Martin, Herman Weeren, Sam Thompson, Andrea Zava and Roy Cooper, who is the Guild's president this year.

Among the 95 booths, displaying the finest in crafts, will be many Nuclear Division employees or their spouses. Don Martin, ORNL Biology Division, will feature baskets, woven in the antique coiled tradition, but rendered in modern yarns and cords. In the same booth will be his wife, Jude, displaying soft fabric toys and baskets. (She is also co-directing the sale this year.) Barbara Hackett, wife of Bill, Y-12 metallurgical engineer, will be showing her enamelware, baskets and "nature notes." She is another co-director of the show. Gwen McLaughlin, wife of Y-12er Larry, will have nature notes as well as macrame accessories.

Leathercrafts

William Dunlap, Y-12 Engineering, will show his meticulously designed furniture and jewelry and silver chest. Working in leather, Barbara Pullen (former Y-12er and wife of Bill, in Y-12's Engineering) will have covered bottles, handbags and small accessories. Jean Cole (T. Earle, ORNL Engineering) will have a booth full of her elegant, functional pottery: plates, bowls, jugs, bottles, planters and sugars and creamers matching teapots and cups. Potters Sam (ORGDP Engineering) and Margaret Thompson will feature a booth of functional ware and also Margaret's counted thread embroideries, which are gaining national prominence through their excellence of design and workmanship. Robert Blackwell (ORGDP machinist) will share with the public his collection of antique pipes as well as those he has made himself.

Ron Carroll, technical illustrator at Y-12, will display his framed pressed flower pictures. Peggy Heddleson

(wife of Fred, Y-12's Nuclear Safety Information) will show her popular terrarium furniture, pendants, and word boards and will have examples of hardanger embroidery and rosemaling. Herman Weeren, ORNL, and his wife Fran will have their pottery; his high fire glazes with crystalline finishes; hers are thrown pots, as well as hanging planters and miniature potpourri jugs (with her own potpourri).

Olive Morrison, wife of James, of the Office of Waste Isolation, will feature her natural material decorative items: wreaths, topiaries, etc.

Two new members will display quilts: Uldean Osborne (wife of John, a pipefitter in Y-12) and Sandy Hartman (wife of Harold, ORNL Engineering). Sharing the booth will be Jeanne Bowman (James, Y-12) who will have samples of her shuckery—decorative items made from cornshucks.

Other exhibits

Returning this year will be Sharon Fields (David, ORNL) with her cleverly designed soft toys and fine stitcheries. Also returning after a year in Europe is Nancy Braski (David, Metals and Ceramics at ORNL) who will offer off-loom weavings. Judy and George Kidd (ORGDP Special Projects) will fill their booth with chair caning, children's toys, mobiles, and creches. David Hackett, ORGDP, and son of Barbara and Bill, will show his interest in Amerind crafts which dates back to his childhood when he discovered he had some Cherokee lineage. Johnny Tighe, Y-12, will show and sell his elegantly handcrafted dulcimers.

Also representing ORGDP is James Brewer, who makes bolo ties, and his wife, Jo, who is known locally for her window ornaments.

Carbide bowling. . . Monday Mixed. . .

In the Union Carbide Monday Mixed League, it's the Electric Bananas by one-half point over the Four Eagles. Don Kelso put some good scores up in October... a single of 233 scratch, with a series of 558.

ORNL C. . .

The Alley Rads keep a comfortable lead over the Damagers. The Be-Bops' Gupton rolled a 647 handicap series recently, as the Remkeys' Akin rolled a 663.

K-25 Tuesday. . .

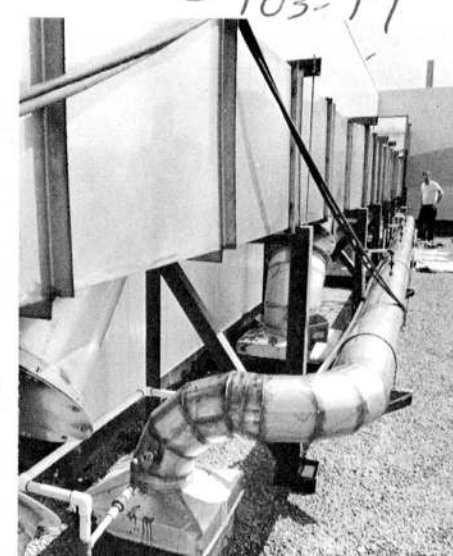
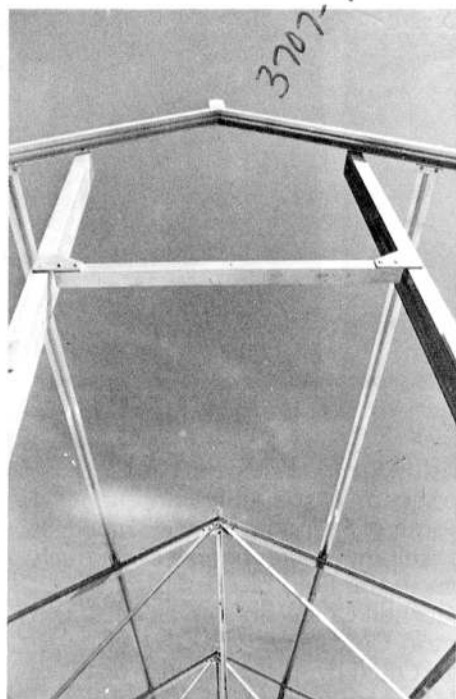
The City Slickers stay out front of the pack in the K-25 Tuesday League, ahead of the Fearless 5. M. N. Strickland's 593 scratch, 659 series; and J. R. Cravens' 601, 712 were high on a recent tally.

ORGDP Women's. . .

Ruby O'Kain came through recently with a 520 scratch; 619 handicap series as the WoodBees keep a more than 10-point lead over the Out-of-Towners.

(Please turn to page 8)

Here we grow. . .



New research facility for Environmental Sciences

Construction of the new Environmental Sciences Laboratory facility at ORNL is nearly complete. The two-unit structure is the first facility in the Department of Energy complex designed specifically for environmental research.

The building will provide office and laboratory space for more than 150 ecologists, engineers, mathematicians and information specialists who make up the Environmental Sciences Division. The Division's primary mission is to provide research and assessment of the various energy-producing technologies in order to maintain the quality and health of the environment.

The principal facility is a three-story building which contains about 89,000 square feet of space. Located on the first floor are administrative offices, an auditorium, an equipment room and several areas for specimen preparation and isotope storage.

The second and third floors contain 32 modular laboratories, staff offices, conference rooms and specialized support facilities. A penthouse encloses the central exhaust system (upper right photo) which serves the laboratories.

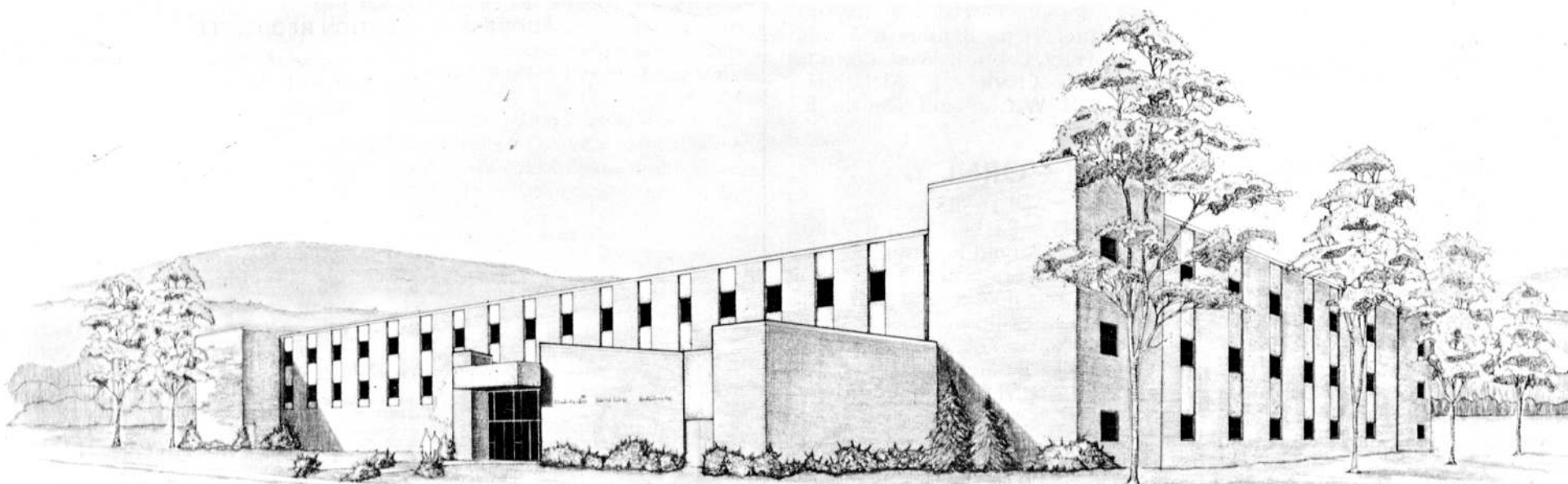
The remaining unit, a 14,600 square-foot controlled environment and animal building, is connected to the main building by a walkway. (Frames for one of the greenhouses are shown in the upper left photo.)

With energy-conservation features incorporated into its design, this new facility will use about half as much electricity for heating and cooling as other buildings its size.

Another unique feature of the building is a mural (center photo) by Charles Counts of Atlanta. Called "Trees for Life," the mural depicts, abstractly, the environment and all growing things.

The building is to be ready for occupancy by the end of the year.

"This new environmental sciences laboratory will put ORNL in the position to be a leading, if not the leading, national environmental research center. We will have the facilities, the space and the expertise to work on a full gamut of energy-related environmental problems," says Stanley I. Auerbach, director, Environmental Sciences Division.





REGISTERED TECHNOLOGIST—Alfred "A.C." Butler, ORNL's Industrial Safety and Applied Health Physics Division, is the first Nuclear Division employee to be registered as a radiation protection technologist. Butler, who has 31 years' company service, has met all requirements of the National Registry of Radiation Protection Technologists which was established in 1976 by the Health Physics Society. John Auxier, right, division director and president of the society, presents Butler his plaque while Roy Clark, left, head of the radiation and safety surveys section, and Doyle M. Davis, associate division director, look on.

about people...



Taylor



Beeler



Hahn

Ellison H. Taylor, ORNL Chemistry Division, has received the Lind Lecture Award, sponsored by the East Tennessee section of the American Chemical Society. The award is made annually in honor of Samuel C. Lind—a native of East Tennessee and long-time ORNL consultant—to recognize individuals who have made significant contributions in the field of chemistry.

He received a B.S. in chemistry from Cornell University and an M.A. and Ph.D. in physical chemistry from Princeton University.

Taylor joined Clinton Laboratories (now ORNL) in 1945, served as director of the Chemistry Division from 1954-1974 and has worked as a research staff member since 1974.

Ben M. Beeler, head of ORNL's Fire and Guard Department, Laboratory Protection Division, has been recently certified as a professional engineer in fire protection engineering. To receive certification, he was recommended by seven professional engineers and had to pass both written and oral examinations.

A 30-year Nuclear Division veteran, Beeler has completed technical fire training courses at Delaney and the University of Denver, as well as the Fire Department's instructors course at Texas A&M. He is a member of the National Fire Protection Association, Society of Fire Protection Engineers, Industrial Fire Protection Section and American Society of Safety Engineers.

He and his wife, Ruth, live in Knoxville. They have a daughter, Lana Kay.

Richard L. Hahn, section head for nuclear and transuranium element chemistry in ORNL's Chemistry Division, has been elected to a three-year term as secretary of the Division of Nuclear Chemistry and Technology, American Chemical Society.

A Carbide employee since 1962, Hahn is also director of the Transuranium Research Laboratory. He received his B.S. in chemistry from Brooklyn College, and his M.A. and Ph.D. degrees in nuclear chemistry from Columbia University.

Hahn and his wife, Sheila, live in Oak Ridge. They have three daughters: Sharyn, Jill and Pamela.

PGDP Recreation sets wildfowl hunt

The distinctive chill in the air turns a hunter's mind again to the woods and the thrill of the first trophy of the season. Once again, the Paducah Recreation Department is sponsoring wildfowl hunting on Ballard County's Renfrow Hunting Range for all employees and retirees. Three of 12 days may be selected for a fee of \$25 per person. A total of 26 hunters will be permitted per day, and blinds will be drawn the mornings of the hunt.

In addition, a special price for employees throughout the season will save the hunter \$10 upon presentation of his badge. Applications for the hunts are to be sent to the Recreation Department, or to the following committee members, along with payment: Hardy Pottinger, C-333; J. D. Turner, C-222; Ronnie Grimm, C-720; J. D. Boss C-337; Tom Norment, C-200; or Ed Kinard, C-720.

Carbide bowling

Carbide Family...

The Double Trouble team moves into the lead in the Carbide Family Mixed League. Del Ducay, 529; and Georgia Guinn, 516, were recent high series rollers in scratch counts.

Carbide Shifters...

Sam Babb rolled a 563 series in scratch recently, as Steve Martin put a 656 handicap one on the boards. The Number 9 team stands in front, one point above the 3 Fuds and A Stilly.

COLD TREATMENT—Ice cubes are effective first aid for a bruise. And cold water is a good pain reliever and first aid for a burn, when the affected area is immersed in the water.

anniversaries...

Y-12 PLANT

30 YEARS

Frank N. Yodzukinas, Fabrication Division; Herman M. Jenkins, General Shops; and Joseph W. Gossage, General Shops.

25 YEARS

Don E. Troutman, Freeman B. Parrott and Lewis C. Watson.

20 YEARS

Robert W. Hayes.

ORGDP

30 YEARS

Tom H. Handley, Technical Development Department; Robert L. Farrar Jr., CPL Operations Department; and Wallace K. Kirkland, Technical Development Department.

25 YEARS

Paul T. Hundley Jr., Keys D. Bolling, George T. Dillon, Warren C. Kitchings and Bernard J. Schaefer.

PADUCAH

25 YEARS

George W. Harned, Richard D. White, Betty J. Barbre, Arthur L. Lewis, Joseph L. Hayden, Ray F. Strittmatter, Harry B. Johnston, John E. Carpenter, Bobby R. West, Curtis J. Chenault, Charles T. McDaniel, Dwight L. Watson and Denzie E. Ellegood.

ORNL

30 YEARS

Paul G. Parker, Plant and Equipment; Arnold R. Olsen, Metals and Ceramics; Guy Jones Jr., Chemical Technology; and Stewart E. Dismuke, Operations.

25 YEARS

Everett L. Biddle Sr., Luther M. Jennings, Samuel E. Bolt and Herbert C. Cox.

20 YEARS

Alexander R. Kerr, Bobby L. Tidwell, Paul L. Hatmaker, James E. Kimblin and William O. Graves.

safety scoreboard

Time worked without a lost-time accident through October 20:

Paducah	90 Days	1,150,000 Man-Hours
ORGDP	175 Days	5,703,852 Man-Hours
Y-12 Plant	247 Days	7,684,000 Man-Hours
ORNL	177 Days	3,879,600 Man-Hours



UNION CARBIDE CORPORATION

NUCLEAR DIVISION

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